SONY

LMD-4251TD / LMD-2451TD

Professional 3D/2D LCD Monitors

LMD-1530W / LMD-2110W / LMD-1510W

Professional LCD Monitors

LUMA
Professional LCD Monitor

3D world
Created by Sony

Sony offers two models of high-performance professional 3D/2D LCD monitor: the LMD-4251TD (42-inch) and the LMD-2451TD (24-inch). These monitors are supplied with the BKM-30G circular-polarizer 3D glasses as a supplied accessory.

The LMD-51 Series 3D/2D monitors incorporate a wide viewing angle LCD panel, high-purity color filters, sophisticated 10-bit signal processing, and Sony's unique ChromaTRU™ color matching technology. With these qualities, they deliver precise images and accurate color reproduction for broadcast and professional video monitoring. Added to this, an automatic white balance calibration function* allows quick and simple monitor adjustment and matching, and offers stable color reproduction. And these LMD-51 Series monitors incorporate a 3G-SDI capability which means they can accept $Y/C_B/C_R$ 4:2:2 1080/50p and 60p video signals using only a single SDI cable.

LMD-30/10 Series monitors, incorporating high-purity RGB color filters and a 10-bit signal processing engine, offer stunning 109% peak white reproduction without clipping, and a smooth gray scale. While these capabilities are appropriate for professional use, this type of LMD-30/10 Series monitors is also suited for use with consumer video and digital camera products – each is equipped with an HDMI connector. These monitors are therefore ideal for both professional and semiprofessional high-definition applications.

This broad and powerful LMD Series professional LCD monitor lineup continues to meet a variety of picture monitoring applications from broadcast and postproduction to surveillance, and to demanding semi-professional applications.

* This works with the combination of a PC and a commercially available calibration tools.

LMD-51 Series
– Versatile 3D/2D LCD Monitors

LMD-4251TD

LMD-2451TD

Fully compatible with 2D monitors

The LMD-4251TD and LMD-2451TD monitors are equipped with consistent quality, functionality, and operability – essential for professional monitors. Both 3D monitors can be used as 2D monitors.*

* The LMD-4251TD does not support 2-channel audio level meter and waveform monitor display.

High-performance LCD panels

The LMD-51 Series monitors incorporate high-resolution professional LCD panels* with an excellent wide viewing angle, and use precisely manufactured RGB color filters, allowing the reproduction of colors with stunning depth and saturation to create highly natural images.

* LMD-4251TD (42-inches, 1920 x1080 pixels), and LMD-2451TD (24-inches, 1920 x 1200 pixels).

10-bit signal processing and ChromaTRU color matching technology

Added to the high-grade LCD panels, a 10-bit signal processing and ChromaTRU technology offer a smooth gray scale and stable white balance.

8-bit (256-levels) image

10-bit (1024-levels) image

* Simulated images

Waveform monitor, audio level meter, and time code display*

The input signal's waveform can be displayed on screen. When an SDI interface is connected, the embedded audio level can be displayed on screen with a 2-channel audio level meter. Installing an optional BKM-250TG 3G-SDI input adaptor, the LMD-51 Series monitors can display on screen an 8-channel audio level meter and a time code – either LTC or VITC is selectable.

* The LMD-4251TD does not support waveform monitor. Audio level meter and Time code can be displayed when the optional BKM-250TG input adaptor is installed and SDI signal is received.

* Simulated images

Stereo audio monitoring

LMD-51 Series monitors are equipped with stereo speakers (1.0 W + 1.0 W) and a stereo headphone jack, which enable users to monitor audio. The SDI-embedded audio can be monitored by the built-in speakers and the monitor output.

Closed-caption decoder

The closed caption information embedded in EIA 608 and EIA 708* can be decoded for display.

* For EIA 708, the optional BKM-244CC Closed Caption Adaptor is required.

Color temperature

Color temperatures of D93, D65, or a user preset value can be selected.

Auto White Adjustment

LMD-51 Series monitors employ a software-based white balance calibration function, which is called "Monitor_AutoWhiteAdjustment". Combined with a PC and commercially available calibration tools*, this function enables simple adjustment of the monitor's white balance.

* Konica Minolta CA-210, CA-310, CS-200, DK-Technologies PM5639/06, X-Rite i1 Pro/i1 Pro2, Photo Research PR-655/670, Klein K-10, and JETI specbos 1211.

Marker settings

LMD-51 Series monitors can display various area markers, including a center marker, aspect markers, and safety area marker. The brightness of these markers can be selected from three different levels: white, gray, and dark gray.

Users can also select either a black or gray mat to fill the outer area of the aspect markers. These flexible marker controls, together with the choice of many different aspect markers, make the LMD-51 Series monitors extremely convenient display devices for a variety of shooting scenarios, from standard video acquisition to digital cinematography.

Marker settings

	16:9 Mode	4:3 Mode
Aspect Marker	4:3, 15:9, 14:9, 13:9, 1.85:1, 2.35:1, 1.85:1 & 4:3	16:9
Center Marker	Yes	
Safety Area	80%, 85%, 88%, 90%, 93%	

VESA mounting

LMD-51 Series monitors provide VESA standard mounting holes which support installation on a wall or ceiling:
LMD-4251TD – 400 x 400 mm pitch
LMD-2451TD – 100 x 100 mm pitch

Standard and optional signal interfaces

In addition to the standard input interfaces of analog composite, component and RGB, and Y/C (S-Video), LMD-51 Series monitors are equipped with two slots for optional input adaptors of any combination for SD or HD video inputs including 3G/HD-SDI. Users can expand the input capability according to their budget and needs.

Computer signal interfaces

LMD-51 Series monitors are equipped with standard interfaces for HD-15 and DVI-D interfaces, respectively.

LMD-2451TD option slots

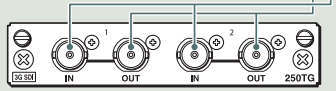
Other features

- Multi-display mode
- H/V Delay Function
- ACC Off
- DC Operation 24 V: LMD-2451TD
- Setup Level for Analog Component and NTSC signal
- Sub Control on Contrast, Chroma, Phase, and Brightness
- Blue-Only Mode
- Monochrome Mode
- Auto Chroma / Phase Setup
- Three-color Tally (LMD-4251TD is not equipped with Tally)
- Key-inhibit function
- Smart APA (Auto Pixel Alignment) for Computer Input

Signal-interface Options

BKM-250TG, 3G/HD/SD-SDI Input Adaptor*

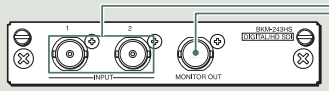
- 3G/HD/SD-SDI signal input (x2)
- 3G/HD/SD-SDI monitor output (x2)



* 3G-SDI, HD-SDI and SD-SDI signals are detected automatically

BKM-243HS, HD-SDI/SD-SDI Input Adaptor*

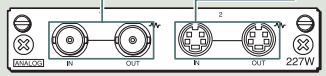
- HD-SDI/SD-SDI signal input (x2)
- HD-SDI/SD-SDI monitor output (x1)



* HD-SDI and SD-SDI signals are detected automatically

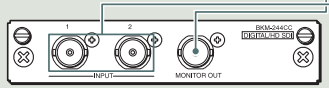
BKM-227W, NTSC/PAL Input Adaptor

- Composite input/output (x1)
- Y/C input/output (x1)



BKM-244CC, HD/SD-SDI Closed Caption Adaptor*

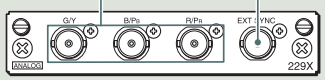
- HD-SDI/SD-SDI signal input (x2)
- HD-SDI/SD-SDI monitor output (x1)



* HD-SDI and SD-SDI signals are detected automatically
* Closed-caption decoders (EIA 608 and EIA 708) are equipped

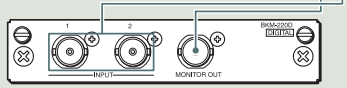
BKM-229X, Analog Component Adaptor

- RGB, $Y/P_B/P_R$ input (x1)
- EXT SYNC (x1)



BKM-220D, SD-SDI 4:2:2 Input Adaptor

- SD-SDI signal input (x2)
- SD-SDI monitor output (x1)



3D Features

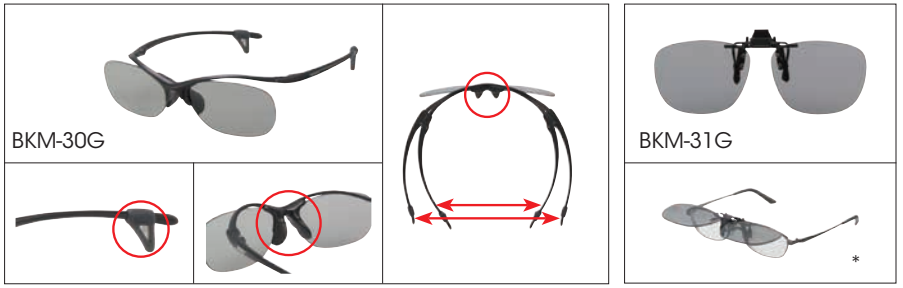
Circular-polarizer 3D system

The LMD-4251TD and LMD-2451TD incorporate a micropolarizer filter attached to the LCD panel. Wearing Sony's BKM-30G or BKM-31G 3D glasses, users experience smooth, uninterrupted viewing of multiple monitors and flicker-free 3D images. This image quality helps users to engage in 3D production operations with minimal stress.

Unique lightweight circular-polarizer 3D glasses

Sony provides two types of 3D glasses: the standard BKM-30G, and the clip-on BKM-31G. These 3D glasses are extremely lightweight*1 and comfortable to wear. Designed with a soft frame and center-support structure, BKM-30G glasses fit any size and shape of head and face, so the wearer experiences minimal stress even during continuous production tasks. Both the BKM-30G and BKM-31G block approximately 99% of the sun's ultraviolet rays.*2

*1 BKM-30G glasses weigh approx. 18 g; BKM-31G glasses weigh approx. 16 g.
*2 These circular-polarizer glasses cannot be used as sunglasses. The blocked spectral range is 280 nm to 380 nm.



* Clip-on BKM-31G glasses are worn with the user's own corrective glasses

Multiple 3D input signal formats and interfaces

The LMD-4251TD and LMD-2451TD accept a variety of 3D signal formats including 3G-SDI, Dual-stream HD-SDI, HD-SDI side-by-side, HD-SDI Line interleave (line-by-line), HD-SDI Field sequential using an optional BKM-250TG 3G-SDI input adaptor, and DVI Line interleave (line-by-line). This input flexibility enables versatile 3D production both in the studio and the field.

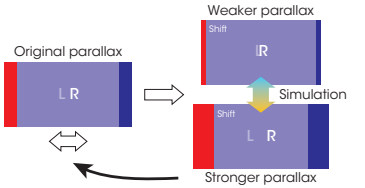
Variety of 3D/2D display functions

These capabilities are assignable to function keys on the front panel of the LMD-4251TD and LMD-2451TD, and can also be assigned to an external remote control unit.

*1 These functions work when the optional BKM-250TG 3G-SDI input adaptor is installed. Some features are unavailable depending on input signals or display modes. Multiple functions may not be used simultaneously.
*2 The 1920 x 1080 image displays with black bands at the top and bottom of the LMD-2451TD WUXGA screen.

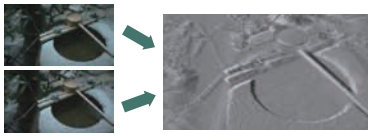
Disparity simulation

Either the left or right signal phase (or both phases) of a 3D image can be shifted horizontally.



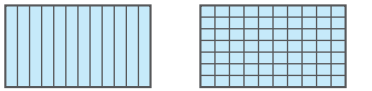
Difference display*

This function displays the difference between the luminance signal of the left (L) and right (R) images of the 3D signal. This function is useful for checking the amount of parallax.



Grid display*

The primary function is to display arbitrary multiple numbers of vertical lines for users to review the overall parallax of captured images.

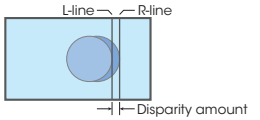


Examples of grid display

* Number of vertical lines can be set variable with 0.1% (2-pixel) pitch.

Disparity ruler*

This function works to precisely measure disparity by setting L-line and R-line to L/R objects respectively on the screen.



Virtual Subject Marker*

This function simulates disparity in a subject on any part of the screen, before the shot is taken.

Transparent marker in a positive parallax

Grey marker in a negative parallax

Checker board
L/R switch
3D/2D color matching function (3D offset adjustment)*
720p Scan Mode Selection*
Side-by-side signals display
Dual time code display
Flip H
Horopter check
Payload ID display

* This function will be available from V1.10, and requires a BKM-250TG serial number of 740001 or higher.

LMD-30/10 Series
– Entry-level LCD Monitor

LMD-1530W

LMD-2110W

LMD-1510W

High purity color filters

Equipped with high-purity RGB color filters, LMD-30/10 Series monitors achieve color reproduction with stunning depth and saturation.

Excellent brightness and contrast

LMD-30/10 Series monitors provide high-brightness, high contrast images thanks to their wide aperture LCD panels. In addition, the use of precisely manufactured RGB color filters allows these monitors to reproduce colors with stunning depth and saturation – creating highly natural images.

109% peak white and 10-bit signal processing

Incorporating high-purity RGB color filters and 10-bit signal processing engine, LMD-30/10 Series monitors offer stunning 109% peak white reproduction without clipping and a smooth gray scale.

Color temperature/gamma selection

With the LMD-30/10 Series monitors, users can select from high, low, or preset color temperatures. A variety of gamma modes can also be selected.

Incorrect gamma image

Correct gamma image

* Simulated images

Operational Convenience

Marker settings

LMD-30/10 Series monitors can display a center marker, aspect markers, and safety area markers in different sizes.* The brightness of these markers can be set at different levels. These flexible marker settings make these monitors extremely convenient display devices for a variety of shooting scenarios.

* 80%, 85%, 88%, 90%, or 93% can be selected.

Selectable scan size for video input and aspect ratio

With LMD-30/10 Series monitors, the scan size can be selected: Normal (0%), Over (5%), and Full scan.
The aspect ratio can be switched between 16:9 and 4:3 according to the input signal.

Three-color tally

LMD-30/10 Series monitors are equipped with a tally lamp that can be lit via a parallel remote connector. The status of the signal displayed on the monitor can be identified by the tally color: red, green, or amber.

Audio monitoring

LMD-30/10 Series monitors are equipped with a monaural speaker (0.5 W), which enables the user to monitor audio.

Protected controls

With LMD-30/10 Series monitors, the key-inhibit function helps prevent inadvertent operation from the control panel.

Mounting Flexibility and Remote Access

Mountable in an EIA 19-inch Standard Rack

LMD-30/10 Series monitors can be mounted in a EIA 19-inch standard rack using optional mounting brackets. The 7U-high LMD-1530W uses the MB-533 and LMD-1510W uses MB-535 respectively. The 9U-high LMD-2110W uses MB-529 Mounting Bracket.

VESA mounting

VESA standard mounting holes (100 x 100 mm pitch) are provided on LMD-30/10 Series monitors to enable wall or ceiling installation.

Parallel remote control

These entry-level type LMD-30/10 Series monitors can be controlled remotely via their parallel remote connectors. In the remote menu, there are 16 functions for the LMD-1530W and LMD-2110W, and 21 functions for the LMD-1510W, of which seven can be allocated to the remote connector.

Input Versatility

Standard inputs and expandability

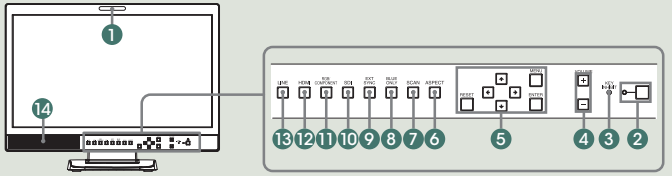
LMD-30/10 Series monitors are equipped with a full range of analog SD inputs including analog composite NTSC and PAL, Y/C (S-Video), and 525i/625i component and RGB. These monitors can also handle HD/SD-SDI input with an optional BKM-341HS HD/SD-SDI input adaptor. This optional feature allows this monitor to connect to HD/SD-SDI equipment for wide range of broadcast and post-production applications. Furthermore, these monitors offer an HD signal input capability via their HDMI and analog component interface, and also can accept DVI signals via the HDMI interface.*

* Requires a DVI conversion cable.

LMD-30/10 Series with the optional BKM-341HS HD/SD-SDI adaptor

Control panel

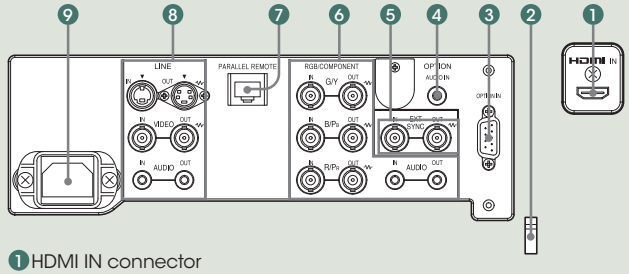
LMD-1530W / LMD-2110W / LMD-1510W



1. Tally lamp
2. standby switch and indicator
3. KEY INHIBIT indicator
4. VOLUME buttons
5. Menu operation buttons
6. ASPECT select button
7. SCAN select button
8. BLUE ONLY button
9. EXT SYNC (external sync) button
10. SDI button
11. RGB/COMPONENT button
12. HDMI button
13. LINE
14. Speaker

Connector panel

LMD-1530W / LMD-2110W / LMD-1510W



1. HDMI IN connector
2. HDMI cable holder
3. OPTION IN connector
4. OPTION AUDIO In (Phono jack)
5. EXT SYNC In/Out (external sync) (BNC)
6. RGB/COMPONENT (BNC), Audio (Phono jack)
7. PARALLEL REMOTE (modular connector)
8. LINE [composite (BNC), Y/C (Mini DIN 4-pin), Audio (Phono jack)]
9. AC In

LMD-51 Series and LMD-30/10 Series Input Signals / Input Adaptors

Video Signal Formats	Input signals				LMD-4251TD / LMD-2451TD					LMD-1530W / LMD-2110W / LMD-1510W			
	Total Line	Active Line	Aspect Ratio	Frame Rate*1	Composite Y/C	RGB Component	SDI 4:2:2	HD-SDI SD-SDI	3G/HD/SD-SDI	Composite Y/C	RGB Component	HD-SDI SD-SDI	HDMI
					Standard					Standard		Option	Standard
					Options								
					BKM-227W	BKM-229X	BKM-220D	BKM-243HS BKM-244CC	BKM-250TG			BKM-341HS	
575/50i (PAL)	625	575	16:9 & 4:3	25	○	○	○	○	○	○	○	○	○
480/60i (NTSC)*1	525	483	16:9 & 4:3	30	○	○	○	○	○	○	○	○	○
576/50p	625	576	16:9 & 4:3	50	N.A.	○	N.A.	N.A.	N.A.	N.A.	○	N.A.	○
480/60p	525	483	16:9 & 4:3	60	N.A.	○	N.A.	N.A.	N.A.	N.A.	○	N.A.	○
1080/24PsF*1*3	1125	1080	16:9	24	N.A.	○*2	N.A.	○	○	N.A.	N.A.	○	N.A.
1080/25PsF*3	1125	1080	16:9	25	N.A.	○*2	N.A.	○	○	N.A.	N.A.	○	N.A.
1080/24p*1	1125	1080	16:9	24	N.A.	○*2	N.A.	○	○	N.A.	○*2	○	○
1080/25p	1125	1080	16:9	25	N.A.	○*2	N.A.	○	○	N.A.	○*2	○	○
1080/30p*1	1125	1080	16:9	30	N.A.	○*2	N.A.	○	○	N.A.	○*2	○	○
1080/50i	1125	1080	16:9	25	N.A.	○	N.A.	○	○	N.A.	○	○	○
1080/60i*1	1125	1080	16:9	30	N.A.	○	N.A.	○	○	N.A.	○	○	○
720/50p	750	720	16:9	50	N.A.	○*2	N.A.	○	○	N.A.	○*2	○	○
720/60p*1	750	720	16:9	60	N.A.	○	N.A.	○	○	N.A.	○	○	○
1080/50p	1125	1080	16:9	50	N.A.	N.A.	N.A.	N.A.	○*4	N.A.	N.A.	N.A.	N.A.
1080/60p*1	1125	1080	16:9	60	N.A.	N.A.	N.A.	N.A.	○*4	N.A.	N.A.	N.A.	N.A.

*1 Compatible with 1/1.001.
*2 For component input only.
*3 Displayed as 1080/48i and 1080/50i on the screen, respectively.
*4 10-bit 4:2:2 Y/C_B/C_R is supported.

LMD-51 Series DVI-D Input Signal Formats

	LMD-4251TD / LMD-2451TD
Vertical frequency	50.0 Hz to 85.1 Hz
Horizontal frequency	31.5 kHz to 77.0 kHz
Dot clock	25.175 MHz to 148,500 MHz
Pcture size, phase	Automatically detected by the DE (Data Enable) signal

LMD-30/10 Series DVI Input Signals

Resolution	Dot clock (MHz)	fH (kHz)	fV (Hz)	LMD-1530W	LMD-2110W / LMD-1510W
720 x 400 70Hz	28.322	31.469	70.087	○	○
800 x 600 56Hz	36.000	35.156	56.250	○	○
800 x 600 60Hz	40.000	37.879	60.317	○	○
1024 x 768 60Hz	65.000	48.363	60.004	○	○
1280 x 768 60Hz	79.500	47.776	59.870	○	–
1280 x 1024 60Hz	108.000	63.981	60.020	–	○

*A DVI conversion cable is required.

Feature Comparison

	LMD-4251TD	LMD-2451TD	LMD-1530W	LMD-2110W	LMD-1510W
Picture size (viewable area, measured diagonally)	42-inch	24-inch	15.3-inch	21.5-inch	15.6-inch
Resolution (pixels)	1920 x 1080	1920 x 1200	1280 x 768	1920 x 1080	1366 x 768
Input interface					
3G/HD/SD-SDI (BNC)	Optional BKM-250TG (x2)		–		
HD/SD-SDI (BNC)	Optional BKM-243HS, BKM-244CC (x2)		Optional BKM-341HS (x1)		
SD-SDI (BNC)	Optional BKM-220D(x2)		–		
Composite (BNC)	(x1), Optional BKM-227W (x1)		(x1)		
Y/C (Mini-DIN 4-pin)	(x1), Optional BKM-227W (x1)		(x1)		
RGB / Component (BNC)	(x3), Optional BKM-229X (x3)		(x3)		
DVI-D / HDMI	DVI-D (x1)		HDMI (x1)*1		
HD15 (D-sub 15-pin)	(x1)		–		
Audio (Phono jack)	(x2) (L/R)		(x3)		
External sync (BNC)	(x1), Optional BKM-229X (x1)		(x1)		
Option slot	2 slots		–		
Remote control					
Parallel remote	Modular connector 8-pin (x1)				
Serial remote	RJ-45 modular connector (Ethernet) (x1) D-sub 9-pin (RS-232C) (x1)		–		
Features					
Auto white balance calibration*2	○		–		
I/P mode selection	3 modes*3		2 modes		
Markers	Aspect, Center, Safety				
Waveform monitor	–	○	–		
Audio level meter (SDI-embedded audio)	○*4		–		
Time code display (SDI-embedded time code)	○*5		–		
Color temperature (D65, D93, and user)	○		High, Low, User		
Closed caption	EIA 608 (standard), EIA/CEA-608/708 (optional BKM-244CC)		–		
Gamma selection	–		5 modes		
Scan mode (Normal (0%), Over (5%), Native)	○		0%, 5%, Full		
Blue only	○				
H/V delay	○		–		
Tally	3 colors				
EIA 19-inch rack-mounting	–		Optional MB-533	Optional MB-529	Optional MB-535
VESA mounting	400 x 400 mm	100 x 100 mm			
Desktop stand	–	Standard			
DC operation	–	24 V	–		
3D support	○*5		–		

*1 DVI signals can be input via the HDMI interface using a conversion cable.
*2 This works with the combination of a PC and a commercially available calibration tools.
*3 With the LMD-4251TD and LMD-2451TD monitors, the I/P mode is fixed to Field Merge mode on 3D mode.
*4 The 8-ch audio level meter can be displayed when the optional BKM-250TG input adaptor is installed.
*5 An optional BKM-250TG 3G-SDI input adaptor is required.

Specifications

	LMD-4251TD	LMD-2451TD
Picture Performance		
Panel	a-Si TFT Active Matrix LCD	
Picture size (diagonal)	1067.0 mm (42 1/8 inches)	613.2 mm (24 1/4 inches)
Effective picture size (H x V)	930.0 x 523.0 mm (36 3/4 x 20 3/4 inches)	518.4 x 324.0 mm (20 1/2 x 12 7/8 inches)
Resolution (H x V)	1920 x 1080 pixels (Full HD)	1920 x 1200 pixels (WUXGA)
Aspect	16:9	16:10
Colors	Approx. 16.7 million colors	
Viewing angle (2D mode)	89°/89°/89°/89° (typical) (up/down/left/right contrast > 10:1)	
Vertical viewing angle (3D mode)	46° at a viewing distance more than 620 mm, crosstalk less than 7% (typical)	54° at a viewing distance more than 320 mm, crosstalk less than 7% (typical)
Input		
Composite	BNC (x1), 1.0 Vp-p ±3 dB sync negative	
Y/C	Mini DIN 4-pin (x1) Y: 1.0 Vp-p ±3 dB sync negative C: 0.286 Vp-p ±3 dB (NTSC burst signal level), 0.3 Vp-p ±3 dB (PAL burst signal level)	
RGB, Component	BNC (x3) RGB: 0.7 Vp-p ±3 dB (Sync On Green, 0.3 Vp-p sync negative) Component: 0.7 Vp-p ±3 dB (75% chrominance standard color bar signal)	
DVI-D	DVI-D (x1), TMDS single link	
HD15	D-sub 15-pin (x1) R/G/B: 0.7 Vp-p sync positive (Sync On Green, 0.3 Vp-p sync negative) Sync: Total level (polarity free, H/V separate sync) Plug & Play function: corresponds to DDC2B	
Audio	Phono jack (x2) (L, R), -5 dBu 47 kilohms or higher	
External sync	BNC (x1) 0.3 Vp-p to 4.0 Vp-p ± bipolarity ternary or negative polarity binary	
Option slot	2 slots, Signal format: H: 15 kHz to 45 kHz, V: 48 Hz to 60 Hz	
Parallel remote	Modular connector 8-pin (x1) (Pin-assignable)	
Serial remote	D-sub 9-pin (RS-232C) (x1), RJ-45 modular connector (Ethernet) (x1) (10BASE-T/100BASE-TX)	
DC in	–	XLR-type 4-pin (male) (x1) DC 24 V (output impedance 0.05 ohms or less)
Output		
Composite	BNC (x1), loop-through, with 75 ohms automatic termination	
Y/C	Mini DIN 4-pin (x1), loop-through, with 75 ohms automatic termination	
RGB, Component	BNC (x3), loop-through, with 75 ohms automatic termination	
External sync	BNC (x1), loop-through, with 75 ohms automatic termination	
Audio monitor out	Phono jack (x2) (L, R)	
Speaker (built-in)	1.0 W + 1.0 W (stereo)	
General		
Power requirements	AC 100 V to 240 V, 50/60 Hz, 2.7 A to 1.1 A	AC 100 V to 240 V, 50/60 Hz, 1.5 A to 0.7 A, DC 24 V, 5.7 A
Power consumption	Approx. 250 W (max.) (with 2 x BKM-229X)	Approx. 130 W (max.) (with 2 x BKM-229X)
Operating temperature	0°C to 35°C (32°F to 95°F), Recommended: 20°C to 30°C (68°F to 86°F)	
Operating humidity	30% to 85% (no condensation)	
Storage and transport temperature	-20°C to +60°C (-4°F to +140°F)	
Storage and transport humidity	0% to 90%	
Operating, storage, and transport pressure	700 hPa to 1060 hPa	
Dimensions (W x H x D) (with stand)	–	602.4 x 497.9 x 269.9 mm (23 3/4 x 19 5/8 x 10 3/4 inches)
Dimensions (W x H x D) (without stand)	1027.0 x 616.0 x 130.0 mm (40 1/2 x 24 3/8 x 5 1/8 inches)	602.4 x 386.2 x 110.0 mm (23 3/4 x 15 1/4 x 4 3/8 inches)
Mass (with options)	23.5 kg (51 lb 13 oz) (with 2 x BKM-229X)	11.5 kg (25 lb 6 oz) (with 2 x BKM-229X)
Mass	23.0 kg (50 lb 11 oz)	11.0 kg (24 lb 4 oz)
Supplied accessories	AC power cord (1), AC plug holder (1), 3D glasses (including case) (2), L/R labels (1), Operating Instructions (1), CD-ROM (1), Using the CD-ROM Manual (1)	

	LMD-1530W	LMD-2110W	LMD-1510W
Picture Performance			
Panel	a-Si TFT Active Matrix LCD		
Picture size (diagonal)	390.0 mm (15 3/8 inches)	547.0 mm (21 5/8 inches)	395.0 mm (15 5/8 inches)
Effective picture size (H x V)	334.0 x 200.0 mm (13 1/4 x 7 7/8 inches)	477.0 x 268.0 mm (18 7/8 x 10 5/8 inches)	344.0 x 194.0 mm (13 5/8 x 7 3/4 inches)
Resolution (H x V)	1280 x 768 pixels (WXGA)	1920 x 1080 pixels (Full HD)	1366 x 768 pixels (WXGA)
Aspect	15:9	16:9	
Colors	Approx. 16.7 million colors		
Viewing angle	89°/89°/89°/89° (typical) (up/down/left/right contrast > 10:1)	170°/160° (typical) (horizontal/vertical contrast > 10:1)	
Input			
Composite	BNC (x1), 1.0 Vp-p ±3 dB sync negative		
Y/C	Mini DIN 4-pin (x1) Y: 1.0 Vp-p ±3 dB sync negative C: 0.286 Vp-p ±3 dB (NTSC burst signal level), 0.3 Vp-p ±3 dB (PAL burst signal level)		
RGB, Component	BNC (x3) RGB: 0.7 Vp-p ±3 dB (Sync On Green, 0.3 Vp-p sync negative) Component: 0.7 Vp-p ±3 dB (75% chrominance standard color bar signal)		
HDMI	HDMI (x1) (HDCP correspondence)		
Audio	Phono jack (x2), -5 dBu 47 kilohms or higher OPTION AUDIO IN: Phono jack (x1), -5 dBu 47 kilohms or higher		
External sync	BNC (x1), 0.3 Vp-p to 4 Vp-p negative polarity binary		
Option in connector	D-sub 9-pin (x1), female		
Parallel remote	Modular connector 8-pin (x1) (pin-assignable)		
Output			
Composite	BNC (x1), loop-through, with 75 ohms automatic termination		
Y/C	Mini DIN 4-pin (x1), loop-through, with 75 ohms automatic termination		
RGB, Component	BNC (x3), loop-through, with 75 ohms automatic termination		
External sync	BNC (x1), loop-through, with 75 ohms automatic termination		
Audio monitor out	Phono jack (x2), loop-through		
Speaker (built-in)	0.5 W (mono)		
General			
Power requirements	AC 100 V to 240 V, 50/60 Hz, 1.0 A to 0.5 A	AC 100 V to 240 V, 50/60 Hz, 1.3 A to 0.6 A	AC 100 V to 240 V, 50/60 Hz, 0.7 A to 0.4 A
Power consumption	Approx. 50 W (max.)	Approx. 69 W (max.)	Approx. 40 W (max.)
Operating temperature	0°C to 35°C (32°F to 95°F) Recommended: 20°C to 30°C (68°F to 86°F)		
Operating humidity	30% to 85% (no condensation)		
Storage and transport temperature	-20°C to +60°C (-4°F to +140°F)		
Storage and transport humidity	0% to 90%		
Operating, storage, and transport pressure	700 hPa to 1060 hPa		
Dimensions (W x H x D) (with stand)	372.0 x 336.0 x 264.0 mm (14 3/4 x 13 1/4 x 10 1/2 inches)	515.0 x 403.0 x 264.0 mm (20 3/8 x 15 7/8 x 10 1/2 inches)	378.0 x 325.6 x 264.4 mm (15 x 12 7/8 x 10 1/2)
Dimensions (W x H x D) (without stand)	372.0 x 288.0 x 100.0 mm (14 3/4 x 11 3/8 x 4 inches)	515.0 x 355.0 x 86.0 mm (20 3/8 x 14 x 3 1/2 inches)	378.0 x 280.6 x 90.0 mm (15 x 11 1/8 x 3 5/8)
Mass	5.9 kg (13 lb)	8.6 kg (18 lb 15 oz)	5.8 kg (12 lb 13 oz)
Mass (without stand)	4.2 kg (9 lb 4 oz)	6.9 kg (14 lb 19 oz)	4.1 kg (9 lb 6 oz)
Supplied accessories	AC power cord (1), AC plug holder (1), Operating Instructions (1), CD-ROM (1), Using the CD-ROM Manual (1)		

Options

BKM-250TG
3G/HD/SD-SDI Input Adaptor
(for LMD-51 Series)

BKM-244CC
HD/SD-SDI Closed Caption Adaptor
(for LMD-51 Series)

BKM-243HS
HD/SD-SDI Input Adaptor
(for LMD-51 Series)

BKM-220D
SD-SDI 4:2:2 Input Adaptor
(for LMD-51 Series)

BKM-229X
Analog Component Adaptor
(for LMD-51 Series)

BKM-227W
NTSC/PAL Input Adaptor
(for LMD-51 Series)

MB-529
Mounting Bracket
(for LMD-2110W)

BKM-30G
3D Glasses
(for LMD-4251TD and LMD-2451TD)

BKM-31G
3D Glasses
(for LMD-4251TD and LMD-2451TD)

BKM-341HS
HD/SD-SDI Input Adaptor
(for LMD-30/10 Series)

MB-533
Mounting Bracket
(for LMD-1530W)

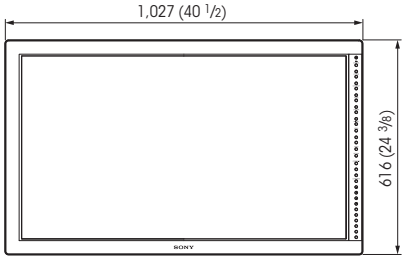
MB-535
Mounting Bracket
(for LMD-1510W)

Dimensions

Unit: mm (inches)

LMD-4251TD

Front



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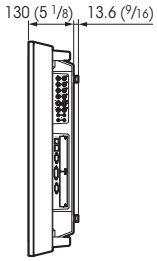
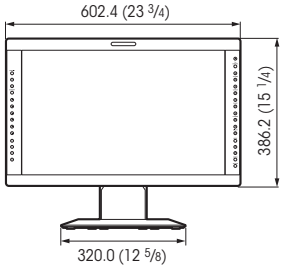


LMD-2451TD

Front



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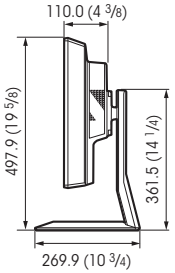
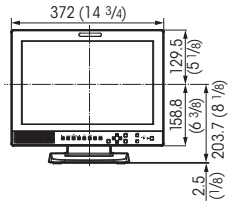


LMD-1530W

Front



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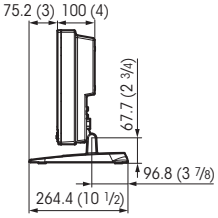
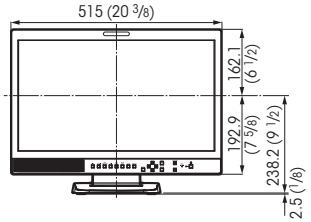


LMD-2110W

Front



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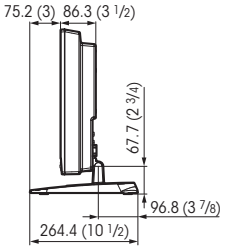
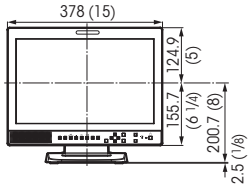


LMD-1510W

Front



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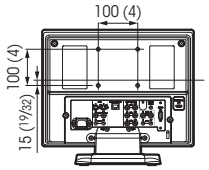
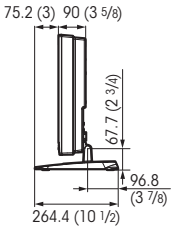


Side



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